

CLAIMS

What is claimed is:

- 5 1. A lock-pin cartridge for incorporation into a variable valve activation assembly to latch and unlatch a first member thereof from a second member thereof, the cartridge comprising:
- a) a body disposable on said first member and having an axial bore having first and second ends, said second end having a passage therethrough;
- 10 b) a piston assembly having a locking pin and a piston disposed in said bore, said locking pin extending through said second end passage to provide said latching and unlatching of said first and second members, said piston being spaced apart from said first and second ends to define a hydraulic chamber and a spring chamber within said bore on opposite sides of said piston; and
- 15 c) biasing means disposed in said spring chamber for urging said piston assembly toward one of said first and second ends.
2. A lock-pin cartridge in accordance with Claim 1 wherein said hydraulic chamber comprises said first end and said spring chamber comprises said second end.
- 20 3. A lock-pin cartridge in accordance with Claim 1 wherein said spring chamber comprises said first end and said hydraulic chamber comprises said second end.
- 25 4. A lock-pin cartridge in accordance with Claim 1 further comprising at least one perforation in said body for providing oil to said hydraulic chamber.
5. A lock-pin cartridge for a variable valve activation rocker arm, comprising:

a) a body having a closure at a first end;

b) a piston assembly disposed in said body and extending through a second end thereof for latching and unlatching said rocker arm, said piston assembly being spaced apart from said first end to define a hydraulic chamber in said body; and

5 c) spring means disposed in said body between said piston and said second end for urging said piston toward said first end.

6. A lock-pin cartridge in accordance with Claim 5 wherein said piston includes an extension extending through an aperture in said first end closure for
10 engaging piston actuating means.

7. A variable valve activation assembly wherein a first member is latchable and unlatchable from a second member thereof, comprising a lock-pin cartridge including:

15 a body disposable on said first member and having an axial bore having first and second ends, said second end having a passage therethrough,

a piston assembly having a locking pin and a piston disposed in said bore, said locking pin extending through said second end passage to provide said latching and unlatching of said first and second members, said piston being spaced apart from said
20 first and second ends to define a hydraulic chamber and a spring chamber within said bore on opposite sides of said piston, and

biasing means disposed in said spring chamber for urging said piston assembly toward one of said first and second ends.

25 8. An assembly in accordance with Claim 7 wherein said first member includes a bore for receiving said lock-pin cartridge.